

City of Cambridge
Community Development Department

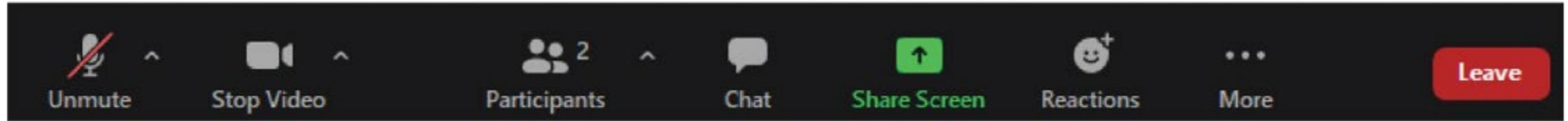
Feasibility Study and Design of a Pedestrian & Bicycle Crossing of the Fitchburg MBTA Rail Line in North Cambridge



CambridgeMA.gov/FitchburgCrossing



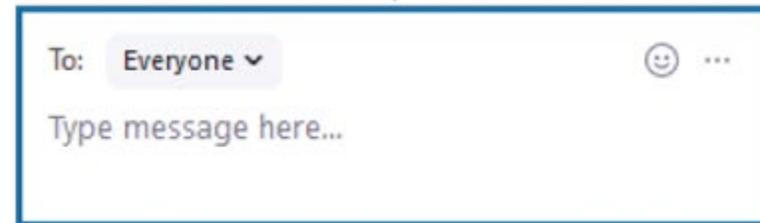
Public Input on Zoom



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For Zoom-related questions reach out to Charlie Creagh at ccreagh@cambridgema.gov



You can call in to this meeting on a phone:

- 309-205-3325
- Meeting ID: 872 6793 6664



We are recording!



Meeting Purpose & Process

Purpose

- Purpose of the meeting is to discuss the scope of the feasibility study and review the three underpass (tunnel) and three overpass (bridge) options

Process

- Discuss the need for a bicycle and pedestrian crossing
- Explain the issues and challenges associated with the different options
- Format: A digital presentation with a slide deck and time for questions and answers



Meeting Outcome

Outcome

- **Identify a preferred over or under crossing option to move to design**
- **Get feedback on crossing concepts for preferred option**



Agenda

Welcome!

1. **Schedule and Goals**
2. **Background, Regional Context, Study Area**
3. **Underpass & Overpass Options**
4. **Opportunities & Challenges**
5. **Next Steps & Q and A**





Schedule

Schedule

- **Fall 2022: Review property and technical issues**
- **Spring 2023: Develop crossing options**
- **Spring-Summer 2023: Public engagement and complete feasibility study**
- **Fall 2023: Begin conceptual design on preferred option**
 - Utilize \$600k ARPA funds
- **2023-2024: Continue public engagement and work with stakeholders on design**




Background & Goals

Goals of the crossing feasibility study include:

- **Create a convenient, comfortable, safe and accessible crossing between Rindge Avenue area and Danehy Park area**
- **Improve resident connections to green spaces and retail offerings**



Regional Context

The next slide has a map showing the important path connections in the region

- Watertown-Cambridge Greenway
- Danehy-New Street Path (in design)
- Linear Park
- Minuteman Bikeway
- Alewife Greenway paths



LEGEND

-  Existing multi-use path
-  Multi-use path in planning, design, or under construction



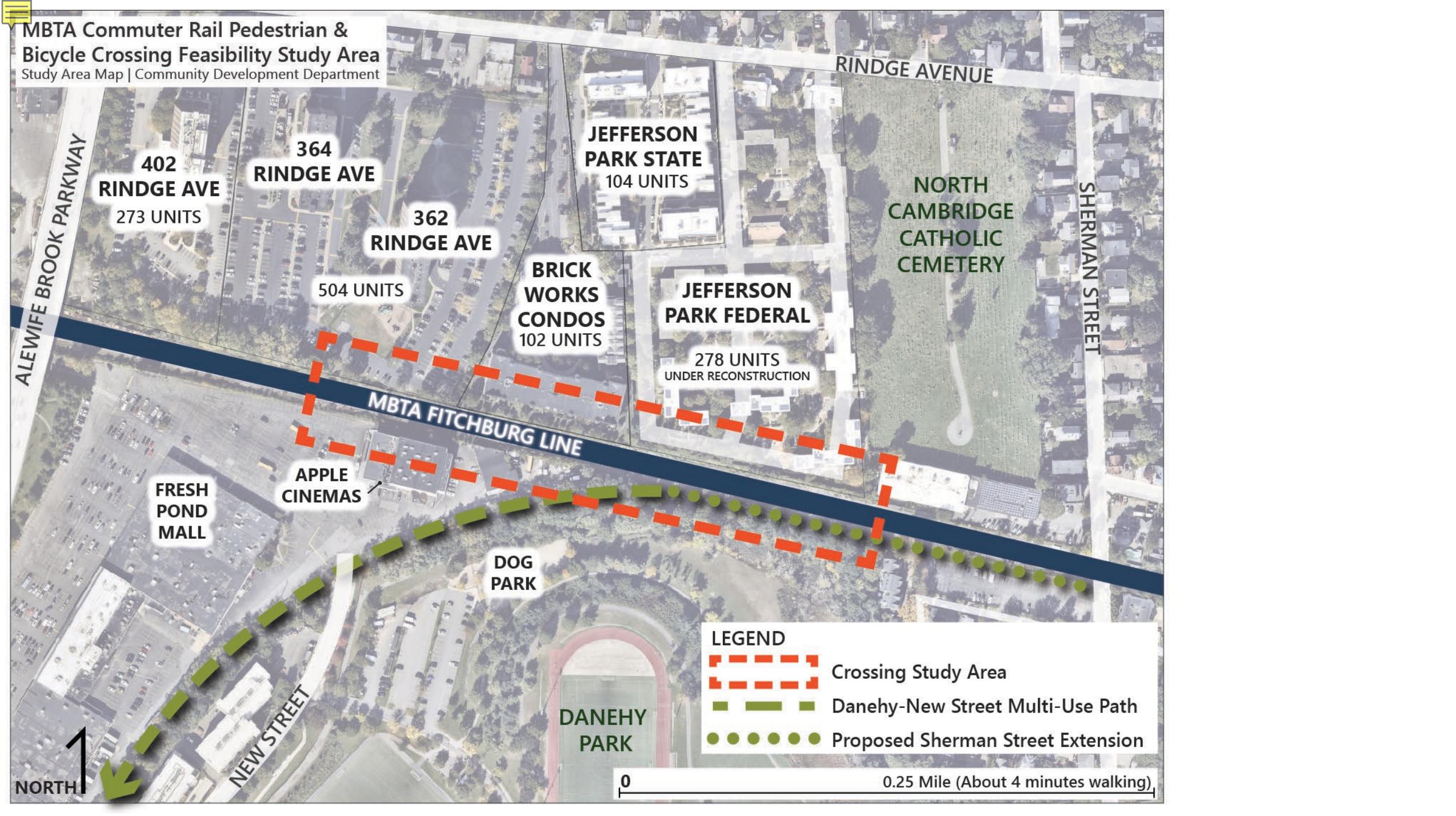
Study Area

The study area in North Cambridge/Alewife area is between many destinations

- **Rindge Avenue**
- **Sherman Street**
- **Danehy Park, Fresh Pond Mall**
- **Alewife Brook Parkway**



MBTA Commuter Rail Pedestrian & Bicycle Crossing Feasibility Study Area
Study Area Map | Community Development Department



402 RINDGE AVE
273 UNITS

364 RINDGE AVE

362 RINDGE AVE
504 UNITS

BRICK WORKS CONDOS
102 UNITS

JEFFERSON PARK STATE
104 UNITS

JEFFERSON PARK FEDERAL
278 UNITS
UNDER RECONSTRUCTION

NORTH CAMBRIDGE CATHOLIC CEMETERY

FRESH POND MALL

APPLE CINEMAS

DOG PARK

DANEHY PARK

RINDGE AVENUE

SHERMAN STREET

MBTA FITCHBURG LINE

NEW STREET

LEGEND

-  Crossing Study Area
-  Danehy-New Street Multi-Use Path
-  Proposed Sherman Street Extension

0 0.25 Mile (About 4 minutes walking)





Opportunities: City-Owned Property

Danehy-New Street Multi-Use Path

- Opportunity to develop a crossing on new city-owned property

bought in 2016

- Does not involved buried landfill issue
- Harder to develop a crossing on private property

Parcel B

- Given to City when Brickworks lot was re-developed
- Located behind Jefferson Park Federal

Fresh Pond
Apartments

Brickworks
Condominiums

Jefferson
Park

Catholic
Cemetery



MBTA Fitchburg Commuter Rail

Apple
Cinemas

Parcel B

Danehy-New Street
Multi-Use Path

Dog
Park

Danehy
Park

LEGEND

 City of Cambridge Owned Land

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Opportunities: Easements for Bicycle & Pedestrian Paths

Easement through Brickworks

- Surface easement for walking and biking from Rindge Ave to railroad right-of-way
- 16' easement along rear of property “for future bike path”

Easement from Jefferson Park

- In Process - Cambridge Housing Authority intends to give City 16' path easement along rear
- Located behind Jefferson Park Federal, which is currently under redevelopment

Fresh Pond Apartments

Brickworks Condominiums

Public use easement, pedestrian access and bike path

Catholic Cemetery

Jefferson Park

Easement in process

MBTA Fitchburg Commuter Rail

Apple Cinemas

16' easement for "future bike path"

Dog Park

Danehy Park

LEGEND

City of Cambridge Owned Land

Easement for Bicycle & Pedestrian Paths



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Fresh Pond
Apartments

Brickworks
Condominiums

Jefferson
Park

Catholic
Cemetery



MBTA Fitchburg Commuter Rail

Apple
Cinemas

**Long Term Goal:
Establish a multi-use path from
Alewife Station area to Porter
Square in conjunction with
Cambridge Redevelopment
Authority project**

Danehy
Park

LEGEND

- Long Term Goal: East-West Multi-Use Path from Alewife to Porter
- — — — — Approx. Danehy-New St Path Location

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Clarifying Questions

Brief break to answer a few clarifying questions on materials presented so far.




Underpass Study Options

The following slides will show three options that were evaluated for feasibility of constructing an underpass beneath the Fitchburg rail tracks

Historic Underpass

- **We are not able to re-establish the historic haul tunnel that used to be in the Study Area**



Historic Aerial

North end of tunnel is buried beneath Brickworks residential building today

Tunnel opening between Fitchburg Line and Watertown Branch

Aerial Image from 1947

- Old haul tunnel
- Filled in and capped before Danehy Park was completed

Underpass Goals

Could we replicate Yerxa Road underpass?

- Well-used underpass
- Wide with clear sightlines
- Many engineering and property constraints at Danehy Park area that didn't exist at Yerxa Road

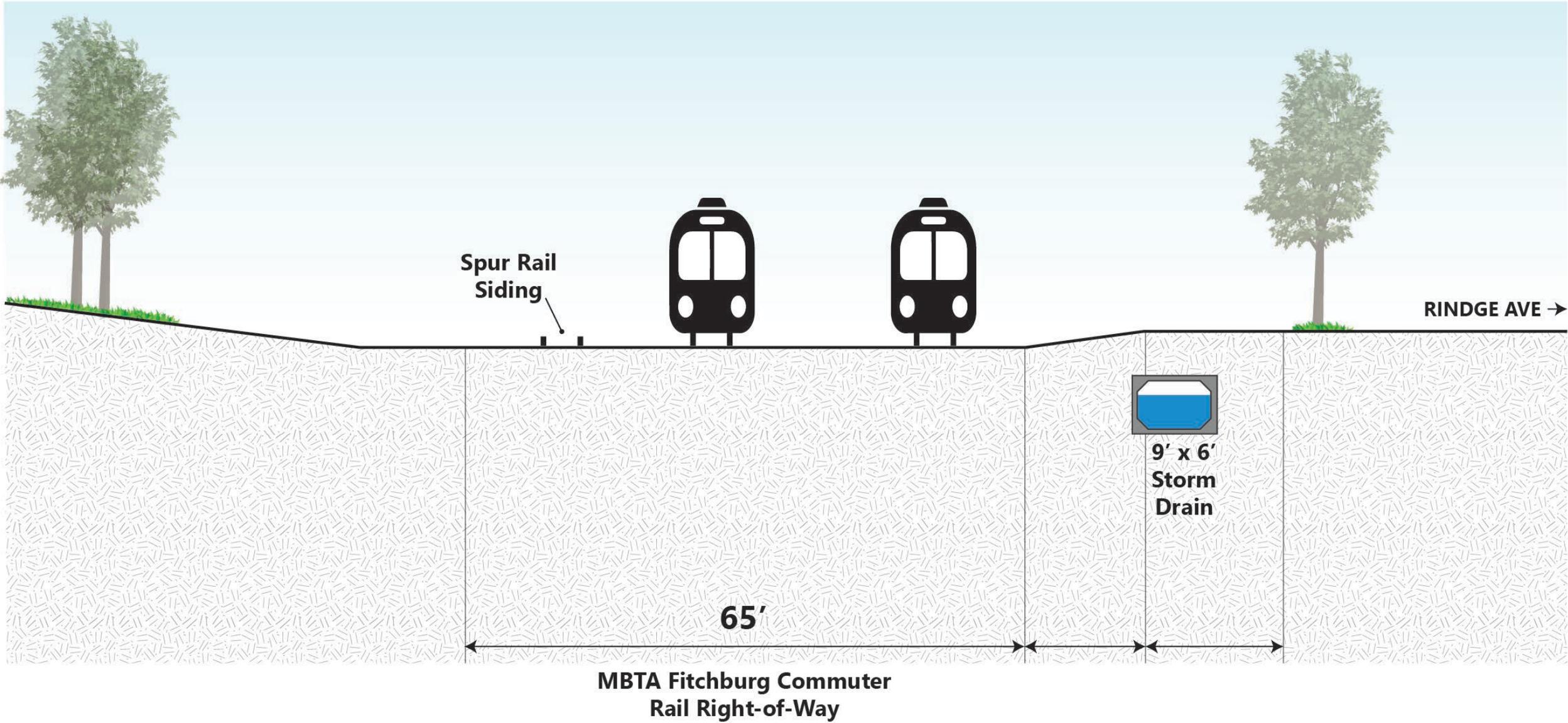


DANEHY CONNECTOR PATH & PARK

MBTA FITCHBURG COMMUTER RAIL LINE

"PARCEL B"

JEFFERSON PARK
CAMBRIDGE HOUSING AUTHORITY

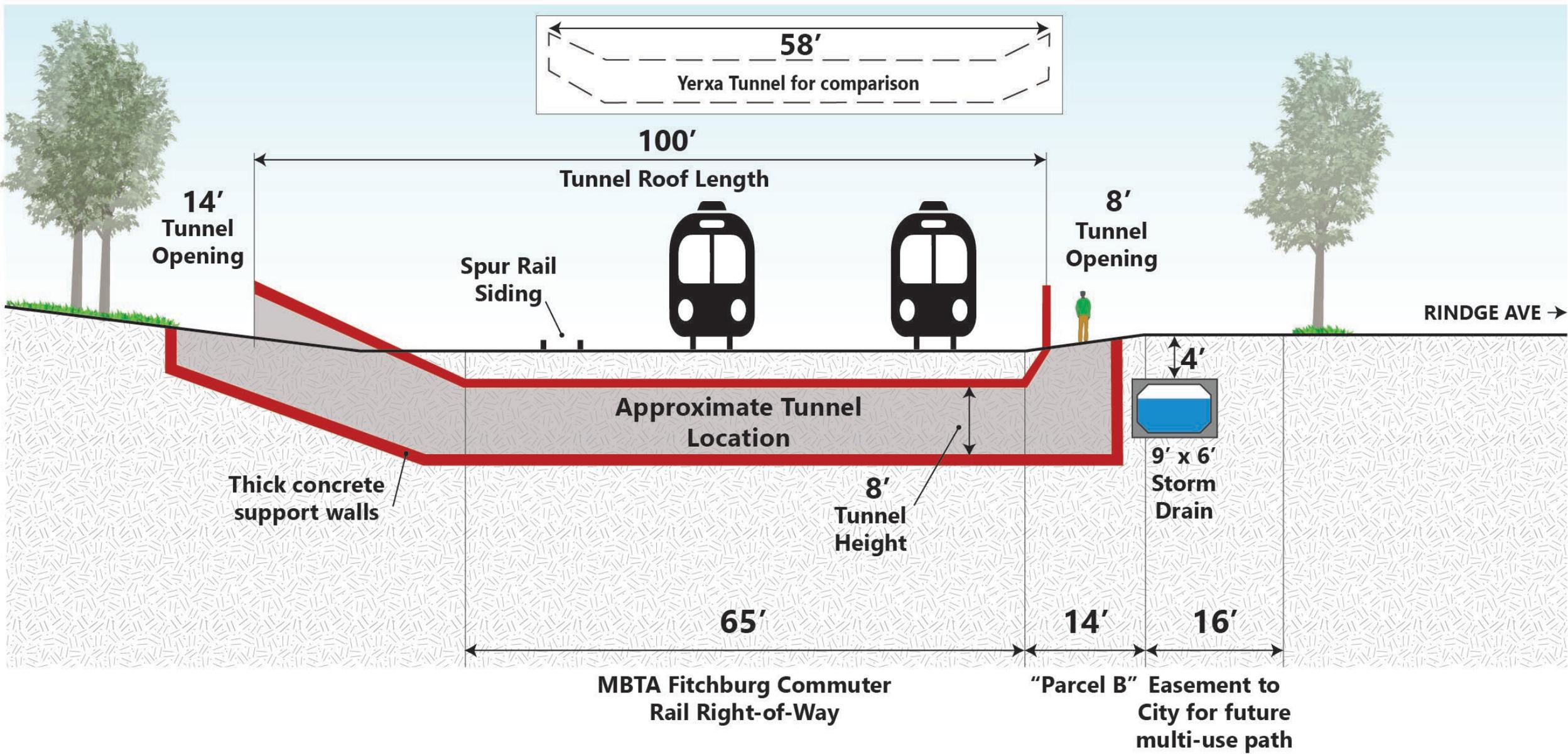


DANEHY CONNECTOR PATH & PARK

MBTA FITCHBURG COMMUTER RAIL LINE

"PARCEL B"

JEFFERSON PARK
CAMBRIDGE HOUSING AUTHORITY



UNDERPASS OPTION 1

Underpass Option 1

362 Rindge Ave

Brickworks Condominiums

Jefferson Park

Catholic Cemetery

Blind corner and narrow ramp opening to avoid storm drain

MBTA Fitchburg Commuter Rail

Apple Cinemas

220 feet of ramping

Dog Park

Danehy Park

LEGEND

-  Underpass Option 1
-  Long Term Goal: Alewife to Porter Sq Path
-  Approx. Danehy-New St Path Location

0 500 Feet



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UNDERPASS OPTION 2

Underpass Option 2

Tunneling under box culvert results in significantly longer ramps (350 ft) in Jefferson Park property

Bottom of tunnel is about 25' below grade

LEGEND

-  Underpass Option 2
-  Long Term Goal: Alewife to Porter Sq Path
-  Approx. Danehy-New St Path Location

362 Rindge Ave

Brickworks Condominiums

Jefferson Park

Catholic Cemetery

MBTA Fitchburg Commuter Rail

Apple Cinemas

Dog Park

Danehy Park

0 500 Feet

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UNDERPASS OPTION 3

Underpass Option 3

362 Rindge Ave

Brickworks Condominiums

Jefferson Park

Catholic Cemetery



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MBTA Fitchburg Commuter Rail

Apple Cinemas

Requires complex siphon system to bypass and relocate culvert drainage system

Dog Park

Danehy Park

LEGEND

-  Underpass Option 3
-  Long Term Goal: Alewife to Porter Sq Path
-  Approx. Danehy-New St Path Location

0 500 Feet



Underpass Challenges

There are major challenges to establishing a crossing under the MBTA Fitchburg tracks

Former Landfill

- Danehy Park built atop former city dump
- Methane issues
- Requires permanent pump station
- Difficult to excavate, permitting

Storm Drain (Box Culvert)

- 9' x 6' storm drain on north side
- Underneath storm drain, impacts to Jefferson Park redevelopment plans
- Avoid storm drain, results in a narrow tunnel opening

Sight Line Constraints

- Wider crossing (more tracks) than at Yerxa Underpass location
- No straight sight line through the tunnel
- 220' feet of ramping with curves at the tunnel entrance

Overpass Study Options

The following slides will show three options that were evaluated for feasibility of constructing a bridge over the Fitchburg rail tracks



Example images showing pedestrian bridges elsewhere

OVERPASS OPTION 1

Overpass Option 1

362 Rindge Ave

Brickworks Condominiums

Jefferson Park

Catholic Cemetery



Approx. 400' of ADA compliant ramping on north side

Bridge structure is about 23' above train tracks

MBTA Fitchburg Commuter Rail

Apple Cinemas

Dog Park

Danehy Park

LEGEND

-  Overpass Option 1
-  Long Term Goal: Alewife to Porter Sq Path
-  Approx. Danehy-New St Path Location

0 500 Feet

DAVEY+BRUMBY FITCHBURG CROSSING_UNDER-PUBLIC-UTG_GRAPHIC.DWG

DANEHY CONNECTOR PATH & PARK

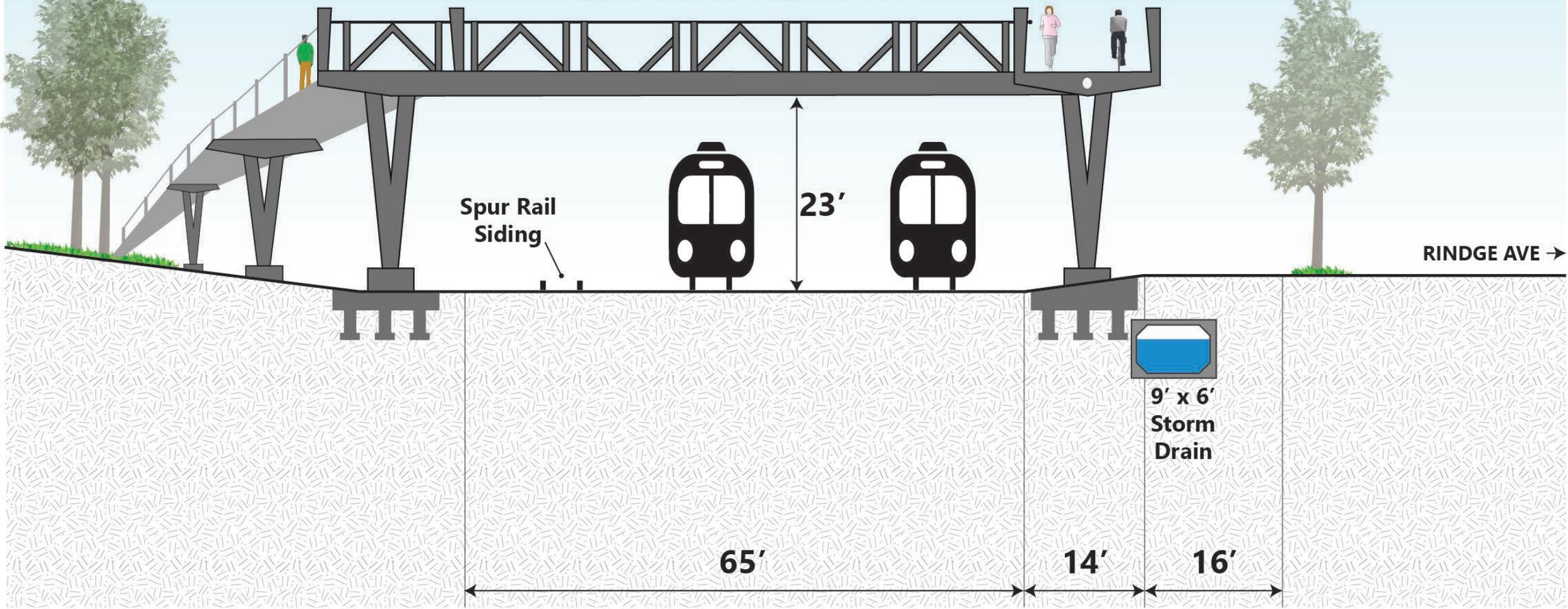
MBTA FITCHBURG COMMUTER RAIL LINE

"PARCEL B"

JEFFERSON PARK
CAMBRIDGE HOUSING AUTHORITY

Simple Section – Overpass Option 1

Approximate Bridge Location



Spur Rail Siding

23'

RINDGE AVE →

9' x 6'
Storm
Drain

65'

14'

16'

MBTA Fitchburg Commuter
Rail Right-of-Way

"Parcel B" Easement to
City for future
multi-use path

OVERPASS OPTION 2

362 Rindge Ave

Overpass Option 2

Brickworks Condominiums

Jefferson Park

Catholic Cemetery



Bridge ramping within MBTA property or area behind Brickworks

MBTA Fitchburg Commuter Rail

Apple Cinemas

Dog Park

Danehy Park

LEGEND

-  Overpass Option 2
-  Long Term Goal: Alewife to Porter Sq Path
-  Approx. Danehy-New St Path Location

0 500 Feet

Overpass Option 3

362
Rindge Ave

OVERPASS OPTION 3

Brickworks
Condominiums

Jefferson
Park

MBTA Fitchburg Commuter Rail

Apple
Cinemas

Danehy
Park

LEGEND

-  Overpass Option 3
-  Long Term Goal: Alewife to Porter Sq Path
-  Approx. Danehy-New St Path Location

0 500 Feet



Overpass Challenges & Opportunities

There are challenges and opportunities to establishing a crossing over the MBTA Fitchburg tracks

Option One

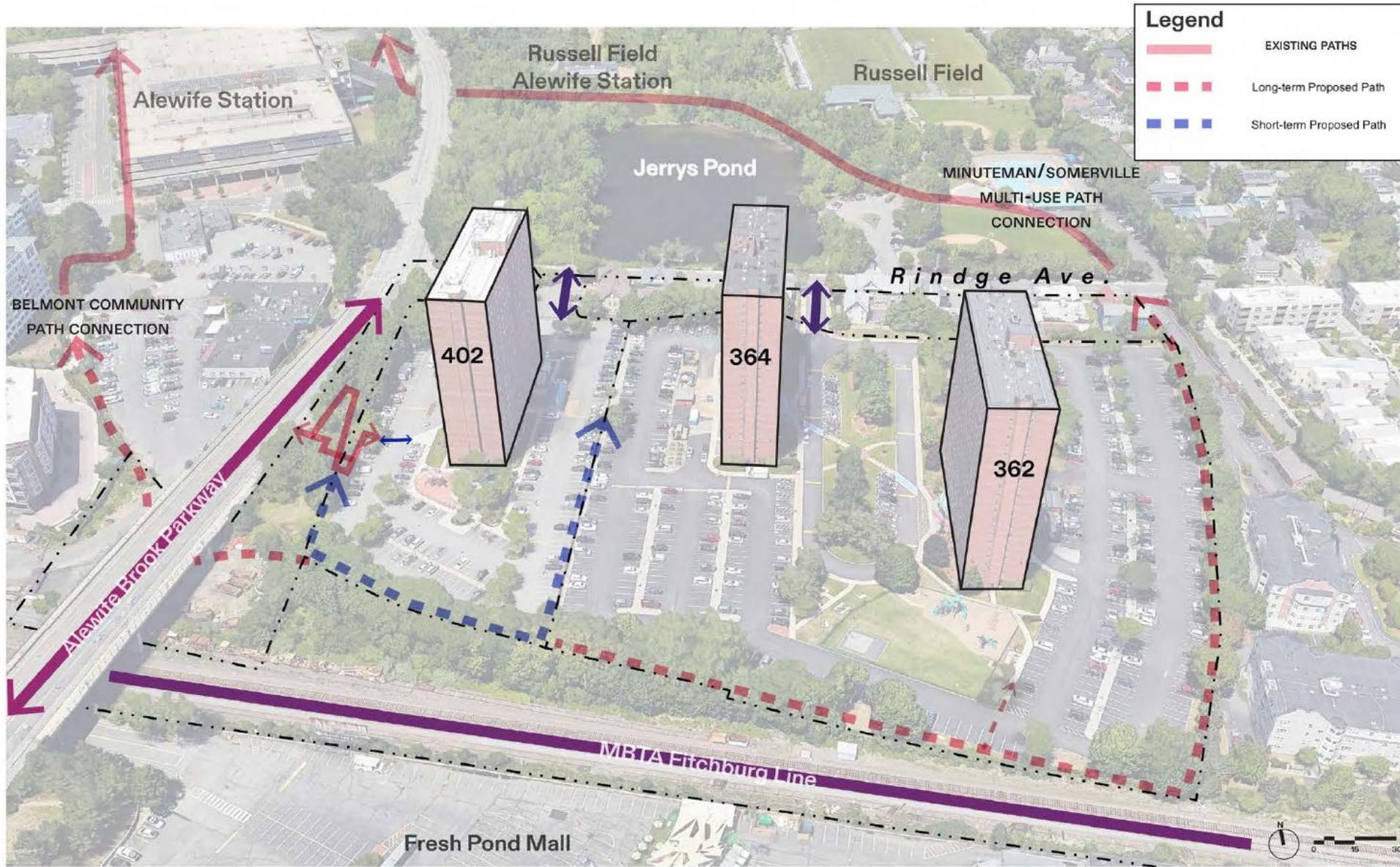
- Ramping lands on City-owned property
- Cambridge Housing Authority easement for at-grade path and possible ramping
- Buffer space between ramping and residential buildings

Option Two

- Property constraints (MBTA and Brickworks) for bridge landing on north side
- Less buffer space and possible visual impact to existing Brickworks buildings

Option Three

- Relies more heavily on MBTA and possible impacts to autobody land
- Close coordination and permissions needed from 362 Rindge Ave property owner



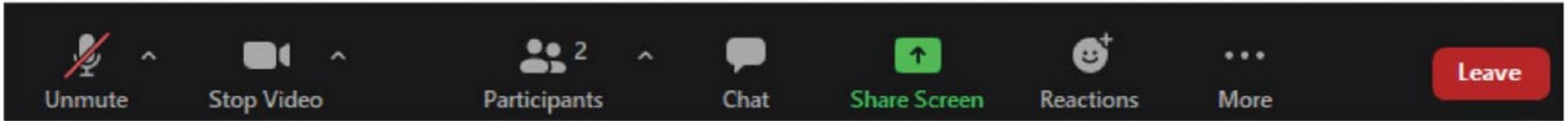
Next Steps

- Review input from public and stakeholders
- Finalize feasibility study and recommend a preferred crossing option
- Work to identify design team for conceptual design of crossing
- Coordinate with CRA on Rindge Commons path project
- Continue to review opportunities for funding for final design and construction



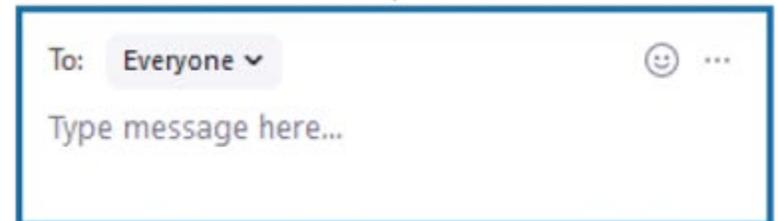
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Susanne Rasmussen, Dir. Environmental and Transportation Planning
Srasmussen@cambridgema.gov

Bill Deignan, Sr. Transportation Program Manager
Wdeignan@cambridgema.gov

Charlie Creagh, AICP, Transportation Project Planner
Ccreagh@cambridgema.gov

Gary Chan, Neighborhood Planner
Gchan@cambridgema.gov

Kevin Beuttell, Supervising Landscape Architect
Kbeuttell@cambridgema.gov

Thank You

